

REMARKS/ARGUMENTS

Claims 1-12, 14-20, and 22-24 are pending in this application. By this Amendment, Applicant amends Claims 1 and 22, and cancels Claims 13, 21, 31, and 32.

The new drawing submitted on February 7, 2007 was not approved for allegedly containing new matter. Consequently, the Examiner objected to the drawings for allegedly failing to show every feature of the invention specified in the claims.

Applicant submitted in the Amendment filed July 13, 2007 a new Fig. 19 to show all of the features recited in original claims 23 and 24 and new claims 31 and 32 in schematic form only. Applicant's undersigned respectfully submits that no new matter has been added because Fig. 19 does not show any features that were not disclosed in the original specification and claims. In the Advisory Action dated August 2, 2007, the Examiner approved new Fig. 19. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to the drawings.

Claims 1, 2, 7-15, and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mukai et al. (U.S. 4,693,139). Claims 1-3 and 7-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Spurny (U.S. 6,125,536). Claims 1, 2, 7-15, 21-24, 31, and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Mukai et al. Claims 1, 2, 4-20, and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. (U.S. 6,312,159) in view of Mukai et al. Claims 13, 21, 31, and 32 have been canceled. Applicant respectfully traverses the rejections of Claims 1-12, 14-20, and 22-24.

Claim 1 recites:

A split connecting rod comprising:
a crank-pin hole;
a valley provided on an inner circumferential surface of the crank-pin hole; and

a fracture starting point groove provided at the base portion of said valley; wherein

the fracture starting point groove includes a pair of walls parallel to a predetermined fracture plane, and a bottom surface which connects the pair of parallel walls and forms an arc with a radius of R; and the valley forms an angle with respect to the predetermined fracture plane greater than an angle that the pair of walls of the fracture starting point groove define with respect to the predetermined fracture plane.. (emphasis added)

Applicant's Claim 1 has been amended to include features that are substantially the same as the features recited in Applicant's canceled Claim 21. Since the only prior art rejection of Claim 21 is under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Mukai et al., Applicant respectfully submits that the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Mukai et al., the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Spurny, and the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. in view of Mukai et al. are moot.

The Examiner alleged that AAPA shows, in Figs. 1A and 1B, upper and lower inner surfaces of a fracture starting point groove 51 which are formed such that the surfaces are parallel to a predetermined fracture plane. The Examiner further alleged that it would have been obvious to one of ordinary skill in the art to provide the fracture starting point groove configuration of AAPA with a valley as taught by Mukai et al. to effectively prevent damage to the valley during the breaking and dividing of the connecting rod.

Applicant respectfully disagrees because Figs. 1A and 1B of Applicant's drawings do **NOT** show upper and lower surfaces or walls of the fracture starting point groove being parallel to a predetermined fracture plane, as alleged by the Examiner. Fig. 1A shows a distant view of the fracture starting point groove 51 wherein the upper and lower surfaces or walls only appear to be parallel to the fracture plane due to the distant view. As clearly disclosed in the Background of the Invention and the Brief Description of the Drawings of the originally filed specification, Fig. 3 is a close up view

showing the fracture starting point groove 51 shown in Fig. 1A, in which the upper and lower surfaces or walls of the fracture starting point groove 51 are clearly **NOT** parallel to the predetermined fracture plane, and instead, are arranged at a substantial angle with respect to the predetermined fracture plane.

Furthermore, in the second full paragraph on page 1 of Applicant's originally filed specification, which addresses the fracture starting point groove 51 shown in Figs. 1A and 1B, Applicant refers to U.S. Patent No. 4,569,109 (the '109 patent) as an example of a connecting rod having a similar fracture starting point groove. As shown in, for example, Figs. 1, 4, and 10 of the '109 patent, the upper and lower surfaces or walls of the fracture starting point grooves 42, 44 and 84, 85 are clearly **NOT** parallel to the fracture plane.

Accordingly, Applicant respectfully submits that the Examiner has mischaracterized the fracture starting point groove 51 shown in Figs. 1A and 1B of Applicant's drawings, and that, contrary to the Examiner's allegations, Figs. 1A and 1B of AAPA clearly fail to teach or suggest the feature of "the fracture starting point groove includes a pair of walls parallel to a predetermined fracture plane" as recited in Applicant's Claim 1.

The Examiner relied upon Mukai et al. to allegedly cure a deficiency of AAPA. However, Mukai et al. clearly fails to teach or suggest the feature of "the fracture starting point groove includes a pair of walls parallel to a predetermined fracture plane" as recited in Applicant's Claim 1. Instead, Mukai et al. specifically teaches that the upper and lower surfaces or walls 11₁, 12₁ of the fracture starting point groove form an angle θ_1 of "**45° to 50°, preferably 50°**" (see, for example, lines 44-47 in column 3 of Mukai et al.). Since Mukai et al. discloses that the angle θ_1 extends from the upper surface or wall to the lower surface or wall of the fracture starting point groove, the angle from the upper/lower surface to the fracture plane is half of the angle θ_1 , i.e., **22.5° to 25°**. Thus, Applicant respectfully submits that Mukai et al. fails to cure the deficiencies of AAPA described above.

The Examiner relied upon Spurny and Ishida et al. to allegedly teach various features recited in Applicant's Claim 1. However, Spurny and Ishida et al. clearly fail to teach or suggest the feature of "the fracture starting point groove includes a pair of walls parallel to a predetermined fracture plane" as recited in Applicant's Claim 1.

Accordingly, Applicant respectfully submits that AAPA, Mukai et al., Spurny, and Ishida et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant's Claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Mukai et al., the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Spurny, the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Mukai et al., and the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. in view of Mukai et al.

In view of the foregoing amendment and remarks, Applicant respectfully submits that Claim 1 is allowable. Claims 2-12, 14-20, and 22-24 depend upon Claim 1, and are therefore allowable for at least the reasons that Claim 1 is allowable.

In view of the foregoing remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-Month extension of time, extending to January 2, 2008, the period for response to the Pre-Appeal Brief Conference Decision dated November 2, 2007.

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December 27, 2007

Reply to the Office Action dated April 11, 2007 and further to the

Pre-Appeal Brief Conference Decision dated November 2, 2007

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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